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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,624	10/24/2003	James David Frost	62004-1791	1506
24504	7590	11/08/2005	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			RAEVIS, ROBERT R	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/693,624	Applicant(s) FROST ET AL.	
	Examiner Robert R. Raevis	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-16,18-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 1,15, the phrase "independently of measurement data obtained from the penetrating tip member" (last two lines of claims 1,15) is new matter. Note that the originally filed specification states that the piezo sensors measure pore fluid pressure "generated by the penetrating tip 712" (p. 27, line 3), which is the embodiment Figure 7 that employs the "uninstrumented penetrating tip 712" (p. 26, line 3 from last). There is a difference between the disclosed "uninstrumented" (as shown in figure 7) and a tip that does not provide data/information (which there is *no* support for in the embodiment of Figure 7).

Claims 1,2,4-6,8,9,11,15,16,20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kram et al '940 in view of Sidey.

Kram et al teach (Figure 2) an apparatus to determine pore fluid and soil properties, including: tip 24; member 22 coupled to the tip, the member including a pressure sensor 30, wherein the pressure sensor obtains a measurement of pore pressure.

Kram does not call the member a mandrel, does not call the member a module, and does not describe the structure of the sensor.

As to claims 1,15, Kram teaches use of o-rings 44,42 to seal the member, suggestive that the apparatus can benefit from replacement of the o-rings over time to assure sealing, suggestive that the member is interchangeable, and thus a module. In addition, the member 22 is shaped like a shaft and supports a working tip 24, and to that extend may be deemed to be a mandrel. Finally, it would have been obvious to employ any known pore pressure sensor in Kram because Kram's generic teaching of pressure sensor 30 is suggestive of any known pore type pressure sensor. Sidey teaches use of a piezo element (col. 3, lines 43-63) to measure pore pressure, suggestive of piezo usage.

As to claim 2, the penetrometer employs wiring and connections to pass power and data within the penetrometer. Also, it is known to utilize pre-amps to convey readable data.

As to claim 4, note load cells 25 and 26.

As to claim 5, note that sensor 30 is adjacent to load cell 26.

As to claims 6,11,16,22, note friction sleeve 22.

As to claims 8,20, Kram relates data to "depth" (col. 3, line 52) measurements.

As to claim 9, note Kram's "on board data acquisition system 21" (col. 3, line 49).

As to claim 20, Kram measures (col. 4, lines 14-16) inclination.

As to claim 21, Kram employs a "digital" (col. 3, line 51) system.

Claims 3,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kram et al in view of Sidey as applied to claim 1 above, and further in view of Cooper et al.

As to claim 3, it would have been obvious to classify Kram's tip as a CPT tip because it is "used to classify soils and characterize sites" (col. 1, line 14, of Cooper et al.).

As to claim 13, Kram's data acquisition system 21 includes "depth" (col. 3, line 52, and Figure 7) determinations, "inclinometer" (col. 4, line 14), and printer 27/monitor 29 for display of data.

As to claim 14, Kram converts data into "digital" (col. 3, line 51) for storage. Storage of a variety of data parameters into a single memory is routinely done so via MUX components.

As to Applicant's **REMARKS**, consider the following:

The arguments are not relevant, due to the designation of new matter above. Once the new matter is removed, the outstanding art rejection would remain applicable.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2856

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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